

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

SYNOPSYS, INC.,

Plaintiff,

v.

AVATAR INTEGRATED SYSTEMS,
INC.,

Defendant.

Case No. [20-cv-04151-WHO](#)

**ORDER CLARIFYING NOVEMBER 12,
2020 ORDER GRANTING
DEFENDANT’S MOTION TO DISMISS
AS TO CLAIMS I AND II AND
DENYING MOTION AS TO CLAIM VI**

Re: Dkt. No. 55

On December 10, 2020, plaintiff Synopsys, Inc. (“Synopsys”) filed an administrative motion seeking clarification of my November 12, 2020 Order in which I granted defendant Avatar Integrated Systems, Inc.’s (“Avatar”) motion to dismiss as to Claims I and II of the Complaint. In that Order I held that U.S. Patents Nos. 8,407,640 (“the ’640 Patent”) and 7,103,863 (“the ’863 Patent”) are invalid under *Alice*, because they are directed to abstract ideas and do not contain any saving inventive concepts. Synopsys seeks an order clarifying that the November 12, 2020 Order only invalidates claim 1 of the ’863 patent because my discussion in that Order focuses on claim 1 which I stated appears “representative” of the other claims. It argues that neither Avatar’s motion to dismiss nor the Order adequately show that claim 1 is in fact representative or properly analyze the remaining claims under *Alice*. In the alternative it requests leave to file a motion for reconsideration on the bases that (1) the Order does not offer adequate justification for invalidating the remaining claims of the ’863 patent and (2) the court may lack jurisdiction to invalidate these claims because they are no longer being asserted in this action. Avatar opposes the motion arguing that the Order clearly invalidates the entire ’863 patent and does not require clarification.

Avatar is correct that my prior Order invalidates the entire ’863 patent, not just claim 1.

1 However, I agree with Synopsys that the Order does not offer a clear explanation why all claims of
 2 the '863 patent, rather than just claim 1, are invalid. This Order accordingly clarifies my prior
 3 Order by providing supplemental discussion explaining why all claims of the '863 patent are
 4 invalid under *Alice*. Because this Order offers additional analysis showing that the entire '863
 5 patent is invalid and because I conclude that I had jurisdiction to rule on all claims of the '863
 6 patent, not just claim 1, Synopsys's alternative request for leave to file a motion for
 7 reconsideration is DENIED.

8 DISCUSSION

9 I. SCOPE OF JURISDICTION

10 Synopsys argues that this court lacked jurisdiction to adjudicate the validity of claims 2-68
 11 of the '863 patent because those claims are not asserted in this case. Dkt. No. 55 ("Mot.") at 6. I
 12 disagree. The entire '863 patent is asserted in the Complaint and Synopsys did not withdraw or
 13 narrow its claims prior to resolution of Avatar's motion to dismiss. This court therefore had
 14 jurisdiction to assess the validity of all claims of the '863 patent.

15 As Synopsys correctly notes, "the existence of a case or controversy must be evaluated on
 16 a claim-by-claim basis." *Jervis B. Webb Co. v. So. Sys., Inc.*, 742 F.2d 1388, 1399 (Fed. Cir.
 17 1984). Synopsys cites to cases holding that infringement contentions can narrow the scope of
 18 claims asserted in an action and, accordingly, the scope of a court's jurisdiction over such claims.
 19 *See Streck, Inc. v. Research & Diagnostic Sys., Inc.*, 665 F.3d 1269, 1282-84 (Fed. Cir. 20120)
 20 (holding that district court lacked jurisdiction over claims that were asserted in the complaint but
 21 not in the plaintiff's infringement contentions or defendant's invalidity contentions). Synopsys
 22 asserts that this court lacked jurisdiction over claims 2-68 of the '863 patent because these claims
 23 are not specifically asserted in the Complaint, which provides "a single exemplary infringement
 24 claim chart for claim 1 of the '863 patent." Mot. at 6. It further notes that, following the hearing
 25 on Avatar's motion to dismiss, and my tentative Order finding the '863 patent invalid, it served
 26 infringement contentions that did not assert any claims based on the '863 patent. *Id.*

27 While it appears that Synopsys has now withdrawn claims based on the '863 patent, at the
 28 time I took Avatar's motion to dismiss under submission Synopsys was broadly asserting claims

based on the entire '863 patent. Count II of Synopsys's Complaint asserts infringement of the '863 patent as a whole. Dkt. No. 1 ("Compl.") ¶¶ 34-43. The Complaint repeatedly alleges that Avatar's software products infringe "one or more claims of the '863 Patent." *Id.* ¶¶ 35, 37-38. And while the Complaint contains an exemplary infringement claim chart only for claim 1, it specifically notes that this is "just one non-limiting example." *Id.* ¶ 36. At no time during the briefing or hearing on Avatar's motion to dismiss did Synopsys indicate that it was only asserting infringement of claim 1 of the '863 patent. Synopsys's decision not to assert infringement of the '863 patent following the hearing on Avatar's motion, and my tentative Order holding the '863 patent invalid, does not retroactively deprive this court of jurisdiction to adjudicate the validity of the entire '863 patent.

For these reasons, I conclude that I had jurisdiction to adjudicate the validity of all claims in the '863 patent.

II. SUPPLEMENTAL ALICE ANALYSIS REGARDING THE '863 PATENT

In my November 12, 2020 Order I held that the '863 patent is invalid under *Alice*. My discussion in the Order focused largely on claim 1 of the '863 patent which I noted appears representative. Dkt. No. 48 ("Order") at 3. Although I believe that statement is accurate and supported by Avatar's motion, I agree with Synopsys that the Order does not clearly explain why claim 1 is representative, or alternatively, why all claims of the '863 patent are invalid. Accordingly, to eliminate any confusion, below I provide supplemental analysis explaining why all claims of the '863 patent are invalid under *Alice*.

A. Alice Step One

As noted in my prior Order, the '863 patent contains "two similar independent claims—claim 1, reciting a method, and claim 35, an article of manufacture—both related to the block abstraction process . . ." In my prior Order I concluded that the '863 patent is invalid under *Alice* step one because it is directed to the patent-ineligible abstract concept of "discarding some irrelevant information and retaining a sub-set of information." Order at 12. This conclusion, based on my analysis of claim 1, is equally applicable to claim 35, which differs only in that it claims an "article comprising a computer-readable medium having instructions stored thereon

1 implementing” the method described in claim 1. Dkt. No. 1-1, Ex. 2 (“’863 Patent”) at 20:6-31.
 2 Claim 35, for the same reasons discussed for claim 1, is therefore directed to the abstract concept
 3 of “discarding some irrelevant information and retaining a sub-set of information.” *See* Order at
 4 12.

5 The remaining claims of the ’863 patent are dependent claims. The ’863 patent recites 33
 6 dependent claims for each of claims 1 and 35, which mirror each other. Claims 2-23 and 36-57 all
 7 list additional details or steps relating to the manipulation or processing of information as part of
 8 creating the block abstraction at the core of claims 1 and 35. These additional details regarding
 9 the manipulation or processing of data are the sort of abstract mental processes that human beings
 10 regularly perform in their minds. Claims 2 and 36 involve “replacing a description” with a
 11 different description. ’863 Patent at 17:20-23; 20:33-35. Claims 3 and 37 involve “determining
 12 contents” of information. *Id.* 17:24-27; 20:36-39. Claims 4, 10, 16, 38, 44, and 50 involve
 13 “processing” information. *Id.* at 17:28-31; 17:66-18:3; 18:33-36; 20:40-44; 21:12-16; 21:47-50.
 14 Claims 5, 7, 11, 13, 17, 19, 39, 41, 45, 47, 51, 53 involve “building a list” with particular
 15 information. 17:32-34; 17:43-45; 18:4-6; 18:12-14; 18:37-39; 18:45-57; 20:45-47; 20:56-68;
 16 21:17-19; 21:25-27; 21:51-53; 21:60-62. And claims 6, 8, 9, 12, 14, 15, 18, 20, 21, 22, and 23, 40,
 17 42, 43, 46, 48, 49, 52, 54, 55, 56, and 57 involve various combinations of “removing,” “labeling,”
 18 “skipping,” “checking,” and “processing” information. *Id.* at 17:35-42; 17:46-65; 18:7-11; 18:15-
 19 32; 18:40-44; 18:48 – 19:3; 20:48-55; 20:59 – 21:11; 21:20-24; 21:28-46; 21:54-58; 21:63 –
 20 22:19.

21 The Federal Circuit has repeatedly held that similar claims involving organizing,
 22 collecting, analyzing, and processing data are directed to abstract concepts. *See e.g., Electric*
 23 *Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016) (“[W]e have treated
 24 analyzing information by steps people go through in their minds, or by mathematical algorithms,
 25 without more, as essentially mental processes within the abstract-idea category.”); *In re TLI*
 26 *Communications LLC Patent Litig.*, 823 F.3d 607, 611 (Fed. Cir. 2016) (holding that claims
 27 involving “classifying and storing digital images in an organized manner” were directed to
 28 abstract concept); *Bozeman Financial LLC v. Federal Reserve Bank of Atlanta*, 955 F.3d 971, 978

(Fed. Cir. 2020) (patent claiming a method for “receiving data from two financial records, storing that data, comparing that data, and displaying the results” was directed to abstract concept); *Content Extraction and Transmission LLC v. Wells Fargo Bank, Nat. Ass’n*, 776 F.3d 1343, 1347 (Fed. Cir. 2014) (patent claims relating to “1) collecting data, 2) recognizing certain data within the collected data set, and 3) storing that recognized data in memory” were directed to abstract concept). While these dependent claims add additional details and specificity to the method and article claimed in claims 1 and 35, the details they add are also abstract concepts related to the manipulation and processing of information. As a result, claims 2-23 and 36-57, which merely add abstract steps to the abstract concepts at the core of claims 1 and 35, are also directed to abstract concepts.

The remaining claims, claims 24-34 and 58-68, all provide additional details concerning the specific information contained in the block abstraction, or used to model the information contained in the block abstraction, described in claims 1 and 35. *See* Patent ’863 at 19:4 – 20:6; 22:20 – 24:10. For example, claims 24 and 58 claim the method and article of claims 1 and 35, where the “physical interconnect information” includes the “physical effects of a circuit layout and fabrication process.” *Id.* at 19:4-6; 22:20-22. Claims 25 and 59 provide even more specificity, claiming the method and article of claims 24 and 58 where “said physical effects include at least one of placement and routing constraints, antenna effects, static timing analysis with RC delay modeling, static timing analysis with capacitive coupling and noise injection, static timing analysis with IR-drop modeling, and electromigration analysis.” *Id.* 19:7-12; 22:23-28. The remaining claims 26-34 and 60-68 provide details as to what information should be used to model certain information contained in the block abstraction. For example, claims 30 and 64 claim the method and article of claims 29 and 63 “wherein electromigration effects are modeled, for signal nets using the same information required for static timing analysis.” *Id.* at 19:34-36; 22:51-53.

As I explained in my November 12, 2020 Order, these additional details specifying the information and data included in or used to create the block abstraction do not save the ’863 patent. The key concept that the patent is directed to, “discarding some irrelevant information and retaining a sub-set of information,” “is abstract regardless of the type of information at issue or the

specific information being discarded and retained.” Order at 10, 12. As the Federal Circuit has made clear “[i]nformation is an intangible” and an abstract process is abstract even “when limited to particular content (which does not change its character as information).” *Electric Power Group*, 830 F.3d at 1353. As a result, claims 24-34 and 58-68 do not change the abstract nature of the ’863 patent’s asserted invention as they merely specify the specific information that is discarded and retained to create the block abstraction. These additional details concerning the information at issue do not take the ’863 patent out of the “realm of abstract ideas.” Accordingly, claims 24-34 and 58-68 are also directed to abstract concepts.

For these reasons, all claims of the ’863 patent are direct to abstract concepts under *Alice* step one.

B. Alice Step Two

Under *Alice* step two, the question is whether the ’863 patent recites a saving inventive concept in the application of the abstract idea that adds “significantly more” than the abstract idea itself. In my November 12, 2020 Order I concluded that there was no such inventive concept recited in the ’863 patent. In that Order I distinguished the claims in the ’863 patent from those found to have a saving inventive concept in *Amdocs (Israel) v. Openet Telecom*, 841 F.3d 1288 (Fed. Cir. 2016) and *Koninklijke KPN N.V. v. Gemalto M2M GmbH*, 942 F.3d 1143 (Fed. Cir. 2019). I noted that, unlike in *Amdocs*, the ’863 claims were not “tied to a specific structure of various components” or “merely combine[d] the components in a generic manner.” Order at 13 (citing *Amdocs*, 841 F.3d at 1301). And, unlike the claims at issue in *Koninklijke*, I explained that the ’863 patent claims were not focused “on a specific means or method that improves the relevant technology” but were “directed to a result or effect that itself is the abstract idea.” 942 F.3d at 1151.

My analysis and conclusions under *Alice* step two are the same whether I focus on claim 1 or look at all the claims. None of the claims of the ’863 patent tie it to a “specific structure” or a non-generic arrangement of computer components as in *Amdocs*. Claim 35 of the ’863 patent recites a “computer readable medium,” but this is simply the generic use of a computer, not an inventive concept. See *Alice Corp. Pty. v. CLS Bank Int’l*, 575 U.S. 208, 223 (“[I]f a patent’s

recitation of a computer amounts to a mere instruction to implement an abstract idea on a computer, that addition cannot impart patent eligibility.”) (internal quotations, and citations omitted). The remaining claims do nothing more to tie the ’863 patent to a “specific structure” or to combine generic components in a novel way. Claim 9, for example, which Synopsys calls out in its administrative motion, claims specific steps for creating a block abstraction, including, as Synopsys states, “building a list of inputs, processing only the non-clock pins in the list of inputs, building a list of successors for each non-clock pin in the list of inputs, labelling cells of the successor pins as timing cells, and labelling cells as multi-driver load cells where the successor pin is a cell input and has more than one predecessor cell or processing forward non-cell-input successor pins.” Dkt. No. 55 at 4. Synopsys argues that my prior Order failed to address whether this ordered combination of steps, as well as the others listed in the remaining dependent claims, are “sufficiently tied to a specific structure of various components or combines the components in a non-generic manner.” *Id.* But none of these steps, describing a specific method for creating a block abstraction through information processing, tie the ’863 patent to any structure or involve the non-generic use or arrangement of generic computer components. The same is true for the remaining dependent claims of the ’863 patent, which merely provide additional details or specificity regarding information processing or the type of information to include in the block abstraction. Because none of the ’863 patent’s claims tie the invention to a specific structure or claim a novel arrangement of generic computer components, they are not comparable to the claims found valid in *Amdocs*.

Similarly, my analysis regarding *Koninklijke* does not change if I analyze each of the ’863 patent claims. As I explained in my prior Order, the ’863 patent is not analogous to the one found valid in *Koninklijke* because it is not directed to a specific method of improving a computer technology but instead to a “result or effect that is itself the abstract idea.” Order at 13 (*citing Koninklijke*, 942 F.3d at 1151). As the Order states, the ’863 patent’s “primary innovation is the idea of using a sub-set of block data to create a block abstraction, rather than estimated or modeled data, because the sub-set of actual data is more accurate. This is an improvement to the quality and accuracy of the data used as part of the chip design process – not an improvement to any

system.” Order at 13. This improvement is accordingly not analogous to the claims in *Koniklijke*, which were directed to improving the functionality of a specific tool in an existing computer system. *Koniklijke*, 942 F.3d at 1151; cf *Electric Power Group.*, 830 F.3d at 1354 (claims directed to abstract concept where “the focus of the claims [wa]s not on such an improvement in computers as tools, but on certain independently abstract ideas that use computers as tools”). None of the ’863 patent claims change this analysis as they are all directed to creating an improved block abstraction. While claim 35 recites the use of a computer and the dependent claims provide additional specificity as to how to create the block abstraction, the overall focus of the claims – creating a better block abstraction by discarding some information and retaining other information – is itself the abstract idea and does not itself improve the functioning of any computer system.

For these reasons, none of the claims of the ’863 patent recite a saving inventive concept under *Alice* step two.

C. Factual Disputes

In its administrative motion, Synopsys argues that my prior Order failed to account for factual disputes relevant to the *Alice* analysis. Mot. at 4. I disagree. In its opposition to Avatar’s motion to dismiss, Synopsys asserted that there were factual disputes concerning “(1) Whether pre-existing hierarchical design methodologies included cross-boundary analysis” and “(2) Whether pre-existing abstraction models described the behavior of blocks using mathematical models, which did not accurately represent the block.” Dkt. No. 30 at 9. Avatar conceded these points for the limited purpose of resolving its motion and I noted in my Order that I would construe these facts “in favor of Synopsys and assume that all assertions and claimed innovations identified in Synopsys’s patents are true” in resolving the motion to dismiss. Order at 14 n.1. These asserted disputes, which I assumed were true both in my prior Order and now, do not alter any of the analysis above.

Nor do I agree that there are factual disputes concerning whether the limitations recited in the ’863 patent’s dependent claims contain an inventive concept, as Synopsys asserts in its administrative motion. Synopsis does not identify any factual dispute concerning what limitations these claims describe – it notes only a legal question whether the listed limitations “contain an

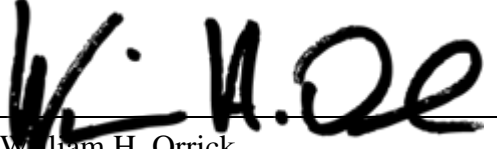
1 inventive concept.” This legal issue is appropriate for resolution at the motion to dismiss stage.
2 As explained above, I conclude that none of the patent’s dependent claims, either alone in an
3 ordered combination, contain an inventive concept.

4 **CONCLUSION**

5 For the reasons listed in my November 12, 2020 Order, and above, all claims of the ’863
6 patent are invalid under *Alice*. Synopsys’s alternative motion for leave to file a motion for
7 reconsideration is DENIED.

8 **IT IS SO ORDERED.**

9 Dated: December 22, 2020

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12 William H. Orrick
13 United States District Judge
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